# The Phonology and Morphology of Anatolian *-*mon*-stems*

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This paper assesses the implications of the Anatolian evidence for the phonological and morphological reconstruction of Proto-Indo-European *-*mon*-stem nominals. I argue that Anatolian inherited the morphological process whereby *-*mon*-stem nominals were formed by internal derivation from neuter *-*men*-stems, as is generally assumed to be the case in Proto-Indo-European. With respect to the phonology of these internally derived *-*mon*-stems, however, I challenge the traditional reconstruction. I argue that the Anatolian evidence supports reconstructing them with paradigmatically invariant full-grade of the root and stressed *-*o*-vocalism of the derivational suffix in their strong case forms rather than the "amphikinetic" inflectional pattern assumed under the Erlangen Model. In addition, I propose that PIE had *-*mon*-stem nominals derived directly from verbal roots, which differed phonologically from the internally derived type in that they had zero-grade of the root.

## 1. Introduction

This paper is concerned with the phonology and morphology of the reflexes of Proto-Indo-European (PIE) *-*mon*-stem nominals in Anatolian and how they inform the reconstruction of this inherited stem class. The Anatolian evidence for *-*mon*-stems is sparse; I am aware of just the three possible direct reflexes of this stem class listed in (1):

(1) a. Hitt. *arkaman-* 'tribute'
b. Hitt. *ishiman-* 'bond, cord'
c. Lyd. *šadmẽ-* 'seal'

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Despite its limited nature, I will argue that the Anatolian evidence has implications for the formal reconstruction of this PIE stem class, aspects of which have recently been called into question. According to the widely accepted Erlangen Model (EM), most or all PIE *-*mon*-stems were formed by INTERNAL DERIVATION (ID) from neuter *-*men*-stems and showed "amphikinetic" (AK) inflection, thus stressed full-grade of the root and **o*-vocalism of the derivational suffix in the strong cases (see, e.g., Schindler 1975:63–4, Widmer 2004:69, Fortson 2010:122–3, Weiss 2020:334). In the oral version of this paper (Yates 2019b),[1] however, I proposed an alternative phonological reconstruction of internally derived *-*mon*-stems according to which these nominals had paradigmatically invariant full-grade of the root and stressed **o*-vocalism of the derivational suffix in the strong cases. These two competing reconstructions of ID *-*mon*-stems are given schematically in (2):

(2)

| | a. AMPHIKINETIC | b. PROPOSED |
|---|---|---|
| NOM.SG | *R(*é*)-*mōn* | *R(*e*)-*mṓn* |
| ACC.SG | *R(*é*)-*mon-m̥* | *R(*e*)-*món-m̥* |
| NOM.PL | *R(*é*)-*mon-es* | *R(*e*)-*món-es* |

I argue below that (2b) with suffixal stress is the most plausible starting point from which the formal properties of (1b) in particular and perhaps also (1c) can be explained diachronically.

Morphologically, too, the Anatolian forms are of comparative interest. On the one hand, this material has generally been neglected in previous discussions of internally derived *-*mon*-stems. I suggest that (1a) and likely (1c) are the historical output of ID, thereby supporting the reconstruction of this specific ID pattern for PIE. On the other hand, I argue that (1b) reflects the use of *-*mon*- as a deverbal suffix. This analysis prompts a reconsideration of whether such "independent" use of *-*mon*- is reconstructible for PIE (cf. Melchert 1983:22–5, Weiss 2017:386–7).

The rest of this paper is structured as follows. The next three sections treat each of the Anatolian forms in (1) in turn: Hitt. *arkaman*- in §2; Hitt. *isḫiman*- in §3; and Lyd. *šadmẽ*- in §4. Section 5 draws general conclusions. An Appendix discusses the word-prosodic properties of independent *-*mon*- under the hypothesis (tentatively endorsed in §3) that this suffix is reconstructible for PIE.

1 I intend to publish a full treatment of the other IE comparative-historical evidence for this stem class and its implications for PIE word prosody elsewhere.

## 2. Hittite *arkaman-* (ANIM), Cuneiform Luwian *arkaman-* (N), and internal derivation

The Hittite animate noun *arkaman-* 'tribute' is first attested in Middle Script, where one unambiguously animate form occurs: ACC.PL ⟨*ar-ga-ma-nu-uš*⟩ (KUB 17.21 ii 12).[2] Confirmation that this noun does not belong to the more numerous Hittite class of neuter *-man*-stems (< PIE *-*men*-) comes from later New-Script forms: NOM.SG ⟨*ar-ga-ma-aš*⟩ (e.g., KUB 22.27 iv 18), ⟨*ar-kam-ma-aš*⟩ (KBo 12.38 i 12) and ACC.PL ⟨*ar-kam-ma-nu-uš*⟩ (KUB 35.92 + KBo 9.146 iv 14).[3] Attested weak case forms include GEN.SG ⟨*ar-kam-ma-na-aš*⟩ (e.g., KUB 8.79 rev. 20), DAT/LOC.SG ⟨*ar-kam-ma-ni*⟩ (Bo 5072 i 11), and GEN.PL ⟨*ar-ga-ma-na-aš-š≠a*⟩ (e.g., KUB 17.21 ii 8–9).

On the basis of these spellings alone, little can be said with certainty about the word's phonological interpretation. Etymological considerations impose some constraints on the set of possible interpretations. Since Pedersen 1938:42, a historical connection has been suspected between *arka(m)man-* and the root *ḫi*-verb *ark-* 'divide, cut off' (3SG.NPST.ACT *ārki* : 3PL *arkanzi*), which Eichner (1982:21–6) relates to the Latin verb *(h)ercīscō* 'divide (an estate)', deriving both from the root *$h_1$*erk-* 'cut up, divide' (*LIV*$^2$ 240, i.a.).[4] This etymology suggests that the peninitial *a*-vowel is orthographic (i.e., the stem contains a cluster [rk:m]). The absence of plene spellings—unsurprising in view of the word's mostly late attestation—leaves the position of stress uncertain. The noun's strong stem forms can thus plausibly be interpreted as in (3):[5]

(3) a. [á:rk:ma(n)-] b. [árk:ma(n)-] c. [ark:má:(n)-]

Of these three phonological interpretations only (3a) can be safely excluded. An initial long vowel in a closed syllable ([á:rk.]) would require a pre-form like *$h_1$órk-mon-* with root *o*-grade. This vowel could potentially be attributed to

2 See *HW*$^2$ I:302–4 for attestations, which may include another fragmentary Middle-Script example ⟨*ar-ga-ma*[-⟩ (KBo 3.23 rev. 2).

3 As with other animate *n*-stems, *arkaman-* also has pseudo-*a*-stem forms based on the NOM.SG in *-aš*—e.g., ACC.PL *arkammuš* (KBo 18.133:9,10); on the phenomenon see Hoffner and Melchert 2008:111.

4 This connection is endorsed by Oettinger (1979:414 n.38), who specifically suggests that *arkaman-* is a deverbal *-*mon*-stem. It is rejected, however, by Puhvel (1984:145–6); see just below for discussion.

5 The fluctuation between singleton *m* and geminate *mm* in New-Script forms of the nominal stem is phonologically non-probative, since the distinction between these spellings is not reliably maintained during this period. Root-final [k:] is assumed on historical grounds.

inner-Anatolian deverbal derivation from the ancestor of *ark-* 'divide', which as a *ḫi*-verb had root stress and **o*-vocalism in its strong forms (e.g., 3SG.NPST.ACT *ārki* < **hₗórk-ei*). On this analysis, however, the synchronic semantic discrepancy between *ark-* and *arkaman-* is somewhat surprising (cf. Puhvel 1984:145–6, who takes it as grounds for rejecting the etymological connection altogether).[6] Still more problematic, though, is that these formal properties are directly at odds with those of Hitt. *išḫiman-* 'bond, cord', which is transparently related to the *ḫi*-verb *išḫ(a)i-* and—as shown in §3 below—must continue a **-mon*-stem with root zero-grade and suffixal stress; accordingly, there is no viable morphological analysis that would yield (3a).

This comparison raises an alternative possibility: *arkaman-* is still deverbal, but instead continues a pre-from like **hₗr̥k-món-* with root zero-grade and suffixal stress, whence (3c) Hitt. [ark:má:(n)-]. Yet while this analysis would align *arkaman-* with *išḫiman-*, it still encounters the same semantic objection noted above. In addition, both this deverbal derivation and the preceding one fail to take into account an important fact—namely, that Luwian has an etymologically related neuter **-men*-stem with same meaning, *arkamman-* 'tribute'. This neuter noun is securely attested twice in Hittite contexts, both times in the NOM/ACC.SG ⟨*ar-kam-ma-an*⟩ (KUB 14.2 i 8, KBo 10.45 iv 50; see Melchert 1993:28).[7] The coexistence of the Luwian neuter and Hittite animate nouns seems unlikely to be coincidental; a more attractive possibility is that the latter is formed historically by ID from the former, as is generally thought to be the case for examples of neuter **-men*-stems standing beside cognate **-mon*-stems in the other IE languages, e.g., N Ved. *bráhman-* 'sacred formulation' ⇒ M *brah-mán-* 'formulator; priest'. The apparent synonymy of the derived stem and its base is no obstacle to assuming this relationship, as there is relatively robust evidence for neuter **-men*-stems paired with (virtually) synonymous **-mon*-stems elsewhere in IE, e.g., (4). If this morphological analysis is correct, then Hitt. *arkaman-* can in principle serve as a testing ground for the two competing reconstructions of ID **-mon*-stems in (2): does either uniquely account for the word's phonological properties, given that it can be interpreted as in (3b) or (3c)?

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6 According to Puhvel (1983:145), the verb "*ark-* denotes mainly subdivision or sequestering, not parceling for purposes of bestowal."

7 Per Melchert 1993:28, the Hittite animate stem is not borrowed from Luwian (contra Starke 1990:260–3), as borrowing would not account for the difference in gender. The unambiguously Luwian verb *arkammanalla-* 'make into a tributary' (1SG.NPST.ACT ⟨*ar-kam-ma-na-al-la-a-ú-i*⟩; KUB 23.127 iii 6') is ultimately based on neuter Luw. *arkamman-* (see Sasseville 2018:31–2).

(4)

| | N *-*men*-stem | | | | ANIM *-*mon*-stem | |
|---|---|---|---|---|---|---|
| a. | Ved. | *várṣman-* | ‘height’ | ⇒ | *varṣmā́ṇam* | ‘id’ (ACC.SG) |
| b. | Ved. | *svā́dman-* | ‘sweetness’ | ⇒ | *svādmā́nam* | ‘id.’ (ACC.SG) |
| c. | Gk. | τέρμα | ‘end, boundary’ | ⇒ | τέρμων | ‘id.’ |
| d. | Lat. | *termen* | ‘boundary post’ | ⇒ | *termō* | ‘finishing post’ |

Under the traditional AK reconstruction in (2a), the expected strong stem pre-form would be *$h_1$*érk-mon-* or possibly *$h_1$*ŕ̥k-mon* with analogical zero-grade from the weak cases, either of which would yield [árkːma(n)-] in (3b).[8] Under Yates’ (2019b) reconstruction in (2b), the only expected pre-form is *$h_1$*erk-món-*, which would yield [arkːmáː(n)-] in (3c).

Both reconstructions of ID *-*mon*-stems are thus compatible with the available evidence for Hitt. *arkaman-*. What is perhaps the more important take-away from this discussion, then, is that there is positive evidence that Anatolian inherited the pattern whereby *-*mon*-stem nominals were internally derived from neuter *-*men*-stems, which has previously been reconstructed for PIE exclusively on the basis of Nuclear Indo-European (NIE) evidence.[9] Moreover, I suggest in §4 below that this ID process also underlies Lyd. *šadmẽ-* and that this form provides evidence for suffixal stress in the Anatolian reflexes of this PIE stem class.

## 3. Hittite *išḫiman-*, *išḫ(a)i-* and primary deverbal derivation

The Hittite noun *išḫiman-* ‘bond, cord’ is securely attested already in Old-Script texts with unambiguously animate forms: NOM.SG ⟨*iš-ḫi-ma-a-aš*⟩ (KBo 17.15 rev.! 11); NOM.PL ⟨$^{KUŠ}$*iš-ḫi-ma-a-ne-eš*⟩ (KBo 17.15 rev. 10); and likely ACC.PL ⟨[$^{KUŠ}$*iš-*]$^{r}$*ḫi-ma-a-nu*$^{1}$*-uš*⟩ (KBo 17.15 rev.! 7).[10] Oblique case forms are more

8 For Hitt. *aRCC* as the regular outcome of **eRCC* see Kloekhorst 2008:95 (cf. Melchert 1994: 134–7). Conclusive support for this sound change comes from **w*-initial *mi*-verbs like *warp-* ‘wash’ and *walḫ-* ‘strike’. It is now clear that the expected historical outcome of the weak stems *$w_{\text{̥}}rp$- and *$w_{\text{̥}}lh_3$- is Hitt. *uR-* [oR–] (see Melchert 2020:266–7 with references); the *a*-vocalism of these verbs must therefore reflect the strong stem before consonant-initial inflectional endings—e.g., 3SG.NPST.ACT *$wérp$-ti* > Hitt. *warpzi*, *$wélh_3$-ti* > Hitt. *walḫzi*—which has been generalized throughout the paradigm.

9 For the term see, e.g., Lundquist and Yates 2018:2080. In the absence of the Anatolian evidence, it would in principle remain possible that ID *-*mon*-stems were an innovation of PNIE, the common ancestor of the non-Anatolian IE languages.

10 See *HW*$^2$ I:143–5 for full attestations, which include pseudo-*a*-stem forms based on the ACC.SG in *-nan* (cf. n.3 above)—e.g., NOM.SG *išḫimanaš* (KBo 1.45 obv. 1, KUB 58.109+ i 14).

limited; only ABL and INS are attested and both occur first in Middle Script: ABL ⟨*iš-ḫi-ma-na-az*⟩ (KUB 36.55 ii 16); INS ⟨*iš-ḫi-ma-ni-it*⟩ (KUB 17.60 obv. 3).[11]

Phonologically, the forms above can be derived directly from a pre-form **sh₂i-món-*.[12] Suffixal **o*-vocalism accounts for the *a*-quality of the stem-final vowel (cf. Melchert 1983:10), while suffixal stress is necessary to explain the plene spellings of this vowel in all three Old-Script strong stem forms (*isḫimā(n)-* [isχi-má:(n)-]). However, there are also several New-Script forms that are unexpected under this derivation: ⟨*iš-ḫa-ma-na-an*⟩ (KUB 55.28+ iii 7) and ⟨*iš-ḫa-mi-na-an*⟩ (KUB 17.27+ ii) with an apparent root allomorph *išḫa-*; and ACC.SG ⟨[*i*]*š-ḫi-me-na-an*⟩ (KBo 52.159 RC 7) and ⟨*iš-ḫi-mi-na-aš*⟩ (KUB 58.109+ i 14) with suffixal *e*(/*i*)-vocalism.[13] Oettinger (1982:167–8, 173–5; 2003:146–7) takes the latter set as significant, arguing that the hapax [*i*]*šḫimenan* alone preserves the original strong stem of this noun, which he reconstructs as "hysterokinetic" (HK) **sh₂i-mén-*. More proximately, he suggests that *išḫiman-* once inflected just like the productive class of Hittite nominals formed with the "ethnicon" suffix *-um(e)n-* (see Hoffner and Melchert 2008:60), which indeed reflects **-mén-* historically. By a combination of phonological and analogical changes discussed in detail by Oettinger (2003) (with refinements in Yates 2016), this class has NOM.SG in *-maš* vs. *-men-* in the other strong cases—e.g., NOM.SG $^{URU}$*Ḫattuš-ummaš* 'man of Hattusa' vs. NOM.PL $^{LÚ.MEŠ}$*Nešumeneš* 'men of Neša'. Yet unlike this class, *išḫiman-* would have undergone a further analogical change, generalizing the vocalism of the NOM.SG in *-maš* at the expense of *-men-* in other strong case forms.

The historical scenario proposed by Oettinger (1982, 2003) is not impossible, but it is manifestly more complicated than starting from a pre-form with suffixal **o*-vocalism (as already observed by Melchert 1983:6). In choosing which forms to explain by inheritance and which by analogy (cf. Melchert 2003:131 n.3), it privileges New-Script evidence for suffixal *e*-vocalism against more abundant and older evidence for *a*-vocalism. Moreover, the result of the proposed analogical leveling is an inflectional pattern (i.e., stressed [-má:(n)-] in the strong cases) that is evinced by perhaps just one other lexical item in Hittite—namely, *arkaman-* discussed in §2. In contrast, if a pre-form with suffixal **o*-vocalism is instead

11 Linguistically, however, the oldest form of the INS must be *išḫimanta*, attested in a New-Script copy of an Old Hittite text (KUB 17.5 i 15 with dupl. KUB 17.6 obv. 11).

12 Modulo the regular recharacterization of the NOM.SG of Hittite animate *n*-stems by *-š*, e.g., Hitt. *ḫaraš* 'eagle' < **h₃ér-ō* (with word-final loss of the stem-final nasal) + **s* (cf. Melchert 1983:3).

13 The last is an innovative pseudo-*a*-stem form (cf. n.10 above). I assume that the two forms with *išḫa-* are errors ("aberrant" per Melchert 1983:10), but for a different view see Kloekhorst 2008:393.

reconstructed, the few cases of suffixal *e*-vocalism in New Script can be attributed to a relatively simple analogical development: on the model of the more productive class of *-um(e)n*-stems with NOM.SG *-maš* and ACC.SG *-menan*, NOM.SG *išḫimāš* served as the basis for an analogical ACC.SG *išḫimenan* in place of regular *išḫimanan* (attested in KBo 20.40 v 9, a New-Script copy of an Old Hittite text).

The only potential argument in favor of Oettinger's reconstruction **sh₂i-mén-* is thus a morphological objection to **sh₂i-món-*: according to EM, all athematic nominals with suffixal **o*-vocalism have stress alternating between their root and inflectional endings—i.e., an AK paradigm. Since it is precisely the suffix that is "skipped" in this stress alternation, Oettinger (2003:146) correctly rejects the reconstruction of such a paradigm ("holodynamische") for *išḫiman-* on the grounds that it cannot account for its attested strong forms with suffixal stress: "durch die Längeschreibung im Nom. Sg. *išḫimāš*, Nom. Pl. *išḫimāneš* usw. gesicherte Akzentuierung des Suffixes [spricht] gegen eine solche ursprünglich holodynamische Flexion." He therefore reconstructs HK **sh₂i-mén-*, which would yield the attested stress pattern, despite the additional costly assumptions that are needed to account for the suffixal *a*-vocalism found in the majority of its forms.

These costs are in fact unnecessary. As I have demonstrated previously (Yates 2019a), PIE had primary athematic nominals with suffixal **o*-vocalism that did not have "amphikinetic" stress patterns. One such class is PIE animate **-oi-*stems, which are continued (semi-)productively in both Hittite and in Greek and which without exception exhibit suffixal stress in their strong case forms, e.g., (5):

(5) a. Hitt. *ḫurdāin* [χ$^{(w)}$ort:-á:i-n] 'curse' (ANIM.ACC.SG)
b. Hitt. *zaḫḫāiš* [t͡saχ:-á:i-s] 'battle' (ANIM.NOM.SG)
c. Gk. φειδώ 'sparing' (F.NOM.SG)
d. Gk. πειθώ 'P/persuasion' (F.NOM.SG)

The agreement between Hittite and Greek with respect to suffixal stress in this class assures that this prosodic property is reconstructible for PIE itself (e.g., ACC.SG **-óy-m̥*, NOM.PL **-óy-es*).

Yet while the **-oi-*stems undermine the EM-based morphological objection to **sh₂i-món-* raised above, the morphology of this form remains as yet unaddressed. Within Hittite, the noun *išḫiman-* is transparently related to the radical *ḫi-*verb *išḫ(a)i-*'bind' (< **sh₂ei-*; see *LIV*$^2$ 544)[14] and can thus be analyzed as in (6a) as a

14 The root is correctly reconstructed in *LIV*$^2$ 544, but for the morphological reconstruction I follow Jasanoff (2018), who derives the Hittite verb from an **h₂e-*conjugation aorist PIE **sh₂ói-*/**sh₂éi-*; the weak stem was then replaced by zero-grade **sh₂i-´* at an early prehistoric

primary derivative to this verbal root (cf. Melchert 1983:3): the accented suffix /-mán-/ attracts stress, conditioning weak allomorphy of the root in exactly the same way as, e.g., the accented 3PL.NPST.ACT ending in (6b) (for details see Yates 2017:98–100, 133–40):[15]

(6) a. Hitt. /sχai-mán-es/ → *išḫimāneš* 'bonds' [isχi-máːn-es] (bind-NML-ANIM.NOM.PL)
b. Hitt. /sχai-ántsi/ → *išḫianzi* 'they bind' [isχiy-ántsi] (bind-3PL.NPST.ACT)

If this analysis is correct, then a further question arises: how did Hittite come to have an accented suffix /-mán-/?

There is widespread agreement that PIE *-*mon*-stems were fundamentally ("originally" per Melchert 1983:22) a denominal stem class, formed by ID from neuter *-*men*-stems (see, e.g., Lundquist and Yates 2018:2122, Weiss 2020:334). However, multiple IE language branches also provide evidence for an "independent" suffix *-*mon*- that attaches to verbal or nominal bases. This independent usage is generally thought to have arisen by a reanalysis of ID *-*mon*-stems (cf. Watkins 1962:181–5, Melchert 1983:23, McCone 1995:4, Remmer 2002–3:173–81, i.a.); what is uncertain, however, is whether this reanalysis occurred already in PIE itself or whether it was an independent innovation of the daughter languages in which it is attested.

To assess this question a brief survey of the evidence is in order. Melchert (1983:22–3) adduces unambiguous examples of nominals derived with a suffix *-*mon*- in at least three branches other than Anatolian: Tocharian, Celtic, and Greek.[16] In Tocharian, TB *-mo-* (< *-*mon*-) forms deverbal adjectives and agent nouns (see Adams 2015:145, 186); thus, e.g., TB *aiśamo* 'wise' continues a (virtual) *$h_x$ei$\hat{k}$-e-mon-, a *-*mon*-stem derived from the "simple" thematic present stem *$h_x$ei$\hat{k}$-e/o- (> TB *aik-* 'know'; *LIV*$^2$ 223). In Celtic, the Old Irish suffix *-em-* (GEN.SG *-emon*/*-eman*; < *-*mon*-) is used primarily to form agent nouns from

stage (for the pattern see Melchert 2013). Kloekhorst (2008:391–3) reconstructs the same *$sh_2$ói-/*$sh_2$i-ˊ ablaut, but with a different morphological analysis.

15 The poverty of animate *-man*-stem nouns in Hittite arguably calls into question the assumption of a synchronic suffix /-mán-/, but this objection can hardly apply to the same derivation at a shallow historical stage.

16 Melchert's (1983) evidence is unambiguous because it comes from non-primary derivatives, where the *-*mon*-stem cannot be attributed to ID from a neuter *-*men*-stem, since *-*men*- occurs only in primary derivation (i.e., attaches only to roots). In the Appendix, I argue that *-*mon*- also occurs in primary derivation and that nominals formed in this way have different formal properties from (other primary-looking) *-*mon*-stems produced by ID.

(historically) derived nominal and verbal stems (see Thurneysen 1961:172, Remmer 2002–3, 2004); thus, e.g., OIr. *brithem* 'judge' is derived from the noun *breth* 'judgment', itself a derivative of the verbal root *$b^her$- 'bear' (see *NIL* 19, 29 with references). Thirdly, in Greek the suffix *-mon-* (< *-*mon*-) is attested from Homer onward in non-primary derivatives, both deverbal (e.g., ἡγεμών 'leader' ⇐ ἡγέομαι 'lead', κηδεμών 'attendant' ⇐ κήδομαι 'care for') and denominal (e.g., δαιτυμών 'feast-goer' ⇐ δαιτύς 'meal, feast', ἀκρεμών 'branch' (Sim.+) ⇐ ἀκρός 'extreme, point').[17] Notably, Greek non-primary *-*mon*-stem nouns almost uniformly exhibit suffixal stress.[18]

More recently, additional evidence for independent *-*mon*- has come to light. Weiss (2017) analyzes the Latin theonym *Sēmō*—long considered to be related to the neuter *-*men*-stem *sēmen* 'seed' by ID (e.g., Schindler 1975:63–4, Widmer 2004:32, Fortson 2010:122)—as the outcome of *$seĝ^h$-*o*-*mon*- (likewise, the theonyms Oscan **Seemun**- and Gaulish **Segomon*-), a non-primary derivative to a thematic adjective *$seĝ^h$-*ó*- 'strong' (> MIr. *seg*/*sed* 'vigor', Ved. *sahá*- 'victorious'). This new analysis has two relevant consequences: (i) Italic must be added to the set of IE branches in which independent *-*mon*- is found; and (ii) the evidence for neuter *-*men*-stems paired with ID *-*mon*-stems in Italic is less than previously assumed.

The addition of this Italic evidence does not counter the standard objection to reconstructing independent *-*mon*- for PIE, which is the absence of word equations across IE branches for nominals clearly derived with this suffix (cf. Weiss 2017:387 n.53). Yet even in the absence of such word equations, it does tip the scales toward reconstructing *-*mon*-, which would neatly explain why this suffix

17 The form δαιτυμών 'feast-goer' is incorrectly cited in Weiss 2017:386 ("δαιτύμων 'dinner'"). The gloss is surely just a typo for 'diner'. The noun is attested with suffixal stress consistently in Homer (West 2017 reports no manuscript variation in its nine occurences in the *Odyssey* [4.621, 7.102, 148, 8.66, 473, 9.7, 15.467, 17.605, 22.12]) and overwhelmingly in later Greek. Suffixal stress for δαιτυμών (likewise, ἀκρεμών) is also reported in Ps.-Arcadius' epitome of Herodian (see Roussou 2018:124).

18 A few exceptions to this rule are attested in later Greek: ἰχνεύμων 'type of weasel/wasp' (Arist.+) ⇐ ἰχνεύω 'track, hunt'; ἀρτέμων 'foresail' (NT+; as PN Anac.+) ⇐ ἀρτάω 'hang, fasten'. The semantic divergence between these nominal forms and their verbal bases points to a principled explanation for their "recessive accentuation": as shown by Probert (2006:128–44, 291–4), Greek nominals that were synchronically perceived as non-derived ("demorphologized") strongly tend to adopt recessive accentuation—the "default" or phonologically preferred stress pattern—in the history of Greek. The same general tendency may in part explain why Greek non-primary *-*mon*-stem adjectives are also regularly recessive; see the Appendix for discussion.

been identified in five IE branches (so far). It is notable, moreover, that in at least three of these branches there is little or no evidence for neuter *-*men*-stems paired with cognate *-*mon*-stems. Pairs of this kind are (to my knowledge) unattested in Tocharian or Celtic, and with the removal of *Sēmō* there is perhaps just a single example in Italic, Lat. *termen* beside *termō* cited in (4d) above.[19] The paucity of evidence for such pairs suggests that this ID pattern did not remain productive in these branches, which in turn makes it difficult to explain how these branches came to have a sufficient core of ID *-*mon*-stems from which independent *-*mon*- could have plausibly been created by reanalysis.

There is also a more direct argument against this objection: *$sh_2i$-*món*- may itself be supported by word equations. Possible NIE reflexes of this pre-form (or of *$sih_2$-*món*- via laryngeal metathesis) include Old Irish *sim* 'chain' (or *sím*; the quantity is unknown), Old Saxon *sīmo* 'rope', Old English *sīma* 'id.', Old Norse *símthe* 'id.', and—most significantly—Vedic *sīmán*- 'hairline; boundary' (see *KEWA* III:475, Beekes 2010:489–90). The Vedic noun means 'hairline, crest of the head' (vel sim.) in its earliest occurrence (ACC.SG *sīmā́nam*, AVŚ IX.8.13),[20] yet this can plausibly be understood as a specialized sense of the meaning 'boundary' found in later Vedic texts. Taken together with Hitt. *išḫiman*-, these forms make a strong case for reconstructing *$sh_2i$-*món*- for PIE.

In my view, reconstructing independent *-*mon*- for PIE provides the likeliest explanation of (i) the wide distribution of independent *-*mon*- in the IE languages and (ii) the various attested reflexes of primary deverbal *$sh_2i$-*món*-, which is probably itself reconstructible for PIE.[21] The fact that reflexes of this suffix attract stress in both Anatolian and Greek—i.e., the only two branches that provide evidence for the prosody of PIE *-*mon*-stems formed in this way—supports the reconstruction of an accented suffix */-món-/ for PIE, which was then inherited into Hittite as /-mán-/ (and Greek as /-món-/). Moreover, if the equation between Hitt. *išḫiman*- and Ved. *sīmán*- is correct, then Vedic Sanskrit would likewise testify to suffixal stress in PIE independent *-*mon*-stems. I pursue this hypothesis in the Appendix

19 Even this example is not entirely secure, since Weiss (2020:287 n.5) raises the possibility that Lat. *termō* is borrowed from Gk. τέρμων.

20 Hitt. *išḫiman*- was connected with this NIE material already by Oettinger (1982:173 n.44), but the suffixal long vowel in Vedic *sīmā́nam* (< *$o$ via BRUGMANN'S LAW) and the suffixal *o*-vowel in Old Saxon speak against the reconstruction *$sh_2i$-*mén*- that he prefers for the Hittite form.

21 I believe this position is widely adopted in practice; for instance, it is implicit in Rau's (2009:72–4) inclusion of *-*mon*- (but not neuter *-*men*-) among the PIE suffixes that belong to the "Caland system" (discussed in the Appendix below).

below, advancing a new proposal for the word-prosodic properties of nominals formed with independent */-món-/ in PIE.

Supposing, then, that a stress-attracting suffix */-món-/ is reconstructible for PIE, a further question arises: how did this suffix come to be stress-attracting? I contend that the only plausible explanation for its stress-attracting property is that the ID *-*mon*-stems from which it was resegmented were likewise stressed on the suffix in the strong cases already in PIE (i.e., NOM.SG *[-mṓn], ACC.SG *[-món-m̥], NOM.PL *[-món-es]). Since the AK paradigm in (2a) reconstructed by EM for ID *-*mon*-stems neither has suffixal stress in the strong cases nor even provides any viable source from which suffixal stress could be analogically generalized by paradigm leveling, it cannot account for the emergence of independent */-món-/. In contrast, the alternative reconstruction of PIE ID *-*mon*-stems in (2b) with suffixal stress provides a clear basis for the development of this stress-attracting suffix in PIE itself.

The principal claim advanced in this paper does not depend on the PIE status of independent *-*mon*-, however. If it were instead the case that independent *-*mon*- was an *einzelsprachlich* innovation, the Anatolian and Greek independent *-*mon*-stems would have effectively the same implications for the reconstruction of PIE ID *-*mon*-stems, albeit indirectly. The development of accented suffixes in the prehistory of Hittite (/-mán-/) and Greek (/-món-/) can be understood only if the ID *-*mon*-stems from which it was resegmented had suffixal stress at that historical stage, which would in turn be most parsimoniously explained by inheritance.

Under either scenario, then, the suffixal stress pattern observed in the strong cases of Hitt. *išḫiman-* and regularly in Greek non-primary *-mon*-stem nouns speaks in favor of reconstructing PIE ID *-*mon*-stems with suffixal stress. This stress pattern in turn supports the reconstruction of PIE ID *-*mon*-stems in (2b) proposed in Yates 2019b against the traditional AK reconstruction in (2a).

## 4. Lydian *šadmẽ-*: another internally derived *-*mon*-stem?

The Lydian animate noun *šadmẽ-* is attested four times (see Gusmani 1964:79, 149): NOM.SG *šadmẽs* (LW 26.1); DAT/LOC.SG *šadmẽλ* (10.9), [*š*]*admẽλ* (26.3), *ša*[*dmẽ*]*λ* (26.4). It also occurs once in a compound with the preverb *kat-*: ACC.PL *καττadmẽs* (10.8; see Sasseville 2017:318). According to Melchert (2004:141–2), the simplex means 'injunction' and is etymologically related to the Hittite verb *išḫ(a)i-* 'bind' (discussed in §3 above), deriving from a pre-form *$sh_2$oi-mén-*. More recently, however, Sasseville (2017:317–8, 356) has argued that it means

'seal', relating it to a Lydian verb *ši-* that similarly occurs compounded with the preverb *kat-* and then means 'approve (by seal)' (cf. Yakubovich 2017:274). In view of this meaning, he further connects Lyd. *ši-* with the Hittite *ḫi*-verb *š(a)i-* 'impress (with a seal)', which is standardly derived from the root *$seh_1$- 'press' (> 'sow') (*LIV*$^2$ 517–8; cf. Kloekhorst 2008:694–5) and is thus cognate with verbs like Goth. *saian*, OCS *sějǫ*, and Lat. *serō* 'sow'. If this etymology is correct, then an alternative historical analysis of Lyd. *šadmẽ-* is needed.

I propose that Lyd. *šadmẽ-* reflects a pre-form *$seh_1$*i-món-*, which is morphologically a *-*mon*-stem formed by ID from a neuter *-*men*-stem *$séh_1$*i-men-*. I suggest that *$séh_1$*i-men-* is in turn an inner-Anatolian replacement of the securely reconstructible neuter *-*men*-stem *$séh_1$-men-* (> Lat. *sēmen*, OCS *sěmę* 'seed'), rebuilt on the basis of the **i*-present continued by Hitt. *š(a)i-* and so likely too Lyd. *ši-*.[22] A pre-form *$seh_1$*i-món-* would account straightforwardly for the shape of the root. Palatalization of the root-initial **s* before **e* is expected (Melchert 1994: 360).[23] After loss of intervocalic *$h_1$*, the diphthong **ei* would regularly develop to **ed* in syllable-final position (per Melchert 2004:139–42); unstressed **e* would then weaken to *a* (Melchert 1994:348), whence Lyd. *šad-*.

A more complicated set of developments would underlie the rest of the stem. I assume that NOM.SG *$seh_1$*i-mṓ* (with regular loss of the word-final nasal) was remade after the other strong cases in *-*mon-* and furthermore recharacterized with *-*s* (cf. n.12 above). The resulting pre-Lyd. *$seh_1$*i-món-s* would then yield the attested NOM.SG *šadmẽs* via regular sound change, with the well-established development of **o* in a closed syllable before a nasal to Lyd. *ẽ* (e.g., PIE *$h_1$*y-ónt-* 'going' > Lyd. *dẽt-* 'mobile property'; see Melchert 1994:348–9). Finally, *šadmẽs* was reanalyzed as a stem *šadmẽ-* + NOM.SG *-s*, and this new stem was leveled throughout the paradigm (hence DAT/LOC.SG *šadmẽλ*; ACC.PL *καττadmẽs*). This last step is admittedly ad hoc, but may find a parallel in the development of Lyd. *kawe-* 'priest'. Melchert (2004:140) suggests that NOM.SG *kawes* reflects **kawed* (<**kow-ḗy*) + **s*; the synchronic stem *kawe-* was then extracted from the NOM.SG and extended through the paradigm.

The analysis proposed above is necessarily speculative, but if correct Lyd. *šadmẽ-* would provide positive evidence for suffixal stress in Anatolian ID *-*mon-* stems. Since Hitt. *arkaman-* discussed in §2 is also compatible with suffixal stress,

22 I follow Jasanoff (2003:94–6) in reconstructing a PIE **i*-present rather than a *-*ye*/*o*-present per *LIV*$^2$ 517–8.

23 In this respect, *$seh_1$*i-món-* is preferable to Melchert's (2004:142) *$sh_2$*oi-mén-*, which requires that palatalization be analogical to the verb.

Anatolian would directly support the reconstruction of PIE ID *-*mon*-stems with suffixal stress as in (2b) above.

## 5. Conclusions

In the preceding three sections the Anatolian evidence for the phonology and morphology of PIE *-*mon*-stems was assessed. With regard to their phonological properties, I have argued that this evidence supports the reconstruction of PIE ID *-*mon*-stems with full-grade root and suffixal stress—i.e., the paradigm in (2b) proposed in Yates 2019b rather than the AK paradigm in (2a) with root stress hypothesized by EM. Direct evidence for suffixal stress may come from Lyd. *šadmẽ-* 'seal', derived in §4 from an ID *-*mon*-stem with suffixal stress, which led to weakening of the unstressed root **e* vowel (> Lyd. *a*). Stronger albeit indirect evidence for suffixal stress comes from Hitt. *išḫiman-* (strong stem [isχi-má꞉(n)-]), which in §3 was derived from PIE **sh₂i-món-*, a primary deverbal *-*mon*-stem to the root **sh₂ei-* 'bind' with likely reflexes across the IE family; its stress pattern can be explained only if ID *-*mon*-stems likewise had suffixal stress (e.g., ACC.SG *[-món-m̥]) when the independent suffix *-*mon-* was resegmented from these stems, regardless of whether that occurred in PIE or in the individual language branches in which it is attested.

With regard to the morphology of PIE *-*mon*-stems, I have argued in §2 that Hitt. *arkaman-* 'tribute' reflects an animate *-*mon*-stem formed by ID from the neuter *-*men*-stem continued by Luw. *arkamman-*. These Anatolian ID *-*mon*-stems bolster the reconstruction of this derivational pattern for PIE, which was previously supported only by evidence from the NIE languages. I have also suggested in §3 that PIE ID *-*mon*-stems were subject to a reanalysis already in the protolanguage, resulting in an independent suffix *-*mon-* that is also reconstructible for PIE (the prosodic properties of which are treated in the Appendix below).

## Appendix. On the prosody of PIE independent *-*mon*-stems

In §§3 and 5 above I argued that the likeliest explanation for the fact that nominals formed with an independent suffix *-*mon-* are continued in at least five IE language branches is that this suffix developed already in PIE by reanalysis of ID *-*mon*-stems. Here I briefly address a question that arises if this hypothesis is correct—

namely, what were the word-prosodic properties of PIE nominals formed with the independent suffix *-*mon*-?[24]

I propose that independent *-*mon*- behaves prosodically just like the animate noun-forming suffix *-*oi*- in PIE (Yates 2019a): the suffix attracts stress in both primary and non-primary derivation (*/-món-/), but only in primary function conditions weak allomorphy in its derivational base (i.e., zero-grade of the root). This pattern is represented is schematically in (7) in comparison to ID *-*mon*-stems (cf. (2b) above):

(7)

| | PIE *-*mon*-STEM NOMINALS | | |
|---|---|---|---|
| | INTERNALLY DERIVED | INDEPENDENT | |
| | NON-PRIMARY | PRIMARY | NON-PRIMARY |
| NOM.SG | *R(*e*)-*mṓn* | *R(∅)-*mṓn* | *STEM-*mṓn* |
| ACC.SG | *R(*e*)-*món-m̥* | *R(∅)-*món-m̥* | *STEM-*món-m̥* |
| NOM.PL | *R(*e*)-*món-es* | *R(∅)-*món-es* | *STEM-*món-es* |

The difference in root vocalism between ID and primary independent *-*mon*-stems follows from the analysis proposed in Yates 2019b: the zero-grade in primary independent *-*mon*-stems is due to deletion of the root vowel, which is phonologically regular in pretonic position; the full-grade of ID *-*mon*-stems is synchronically transferred from their derivational base—i.e., neuter *-*men*-stems, which regularly have stressed full-grade of the root.

Evidence for the word-prosodic properties of non-primary *-*mon*-stems comes from Tocharian, Italic, Celtic, and above all, Greek. Since the former three have developed innovative stress systems, they testify only to the issue of stem allomorphy, and indeed, appear to support the picture in (7)—i.e., that the stem of the base undergoes no (segmental) changes when *-*mon*- is attached. This pattern is evident, e.g., in Weiss's (2017:386–7) reconstructed derivation *$seĝ^h$-*ó*- ⇒ *$seĝ^h$-*o-mon*- (discussed in §3), the output of which he takes to be the source of both Italic and Celtic theophoric material. It is also clearly evident in the Greek non-primary *-*mon*-stem nouns treated in §3, which, moreover, regularly exhibit the suffixal stress pattern in (7)—e.g., ἡγεμών 'leader' ⇐ ἡγέομαι 'lead', κηδεμών 'attendant' ⇐ κήδομαι 'care for'.[25]

24 Even if independent *-*mon*- is not reconstructible for PIE (cf. §3 above), the prosodic behavior of nominals formed with this suffix in Greek and Anatolian—which in general terms preserve the inherited PIE word-prosodic system—can be taken as indirect evidence for the phonological properties of primary and non-primary nominals formed with accented derivational suffixes.

25 There is one limited sense in which the stem of the base shows variation in non-primary *-*mon*-stems (and in non-primary derivatives more generally)—namely, in the quality of a stem-final

Yet while the evidence above is consistent with the prosodic reconstruction proposed in (7), a complication for the stress pattern is posed by a set of Greek non-primary *-*mon*-stem adjectives, which have recessive accent rather than suffixal stress—e.g., μαχήμων 'warlike' (⇐ μάχη 'battle'), δαήμων 'experienced' (⇐ AOR.INF δαῆναι 'learn'). The prosodic behavior of these adjectives fits with a broader generalization about -*mon*-stem adjectives in Greek, which categorically exhibit recessive accent. This includes those that historically reflect ID *-*mon*-stems (e.g., μνήμων 'mindful' ⇐ N μνῆμα 'remembrance' < *$mnéh_2$-*men*-), as well as by far the most common type, exocentric compound adjectives (i.e., bahuvrīhis; e.g., ἀναίμων 'bloodless', πολυκτήμων 'very rich'). It is argued in Yates 2019b that recessive accent in Greek non-compound *-*mon*-stem adjectives is an innovation, likely due in part to the influence of the very productive exocentric compounds, where recessive accent is the expected reflex of inherited first member stress in this PIE compound type. In my view, then, Greek non-primary independent *-*mon*-stem nouns like δαιτυμών best preserve the stress pattern of this PIE stem class, which is thus reconstructible as proposed in (7).

The evidence for primary independent *-*mon*-stems is more difficult to evaluate. The basic problem is that ID *-*mon*-stems and primary independent *-*mon*-stems both look primary, in the sense that no overt suffixal material intervenes between the root and the initial *[m] of the derivational suffix (cf. n.16 above). The reflexes of primary-looking *-*mon*-stems must therefore be evaluated on a case-by-case basis to determine which of these two types they continue. I have argued in §3 that Hitt. *išḫiman*- 'bond, cord' (< *$sh_2i$-*món*-) continues an independent *-*mon*-stem, a primary derivative of the verbal root *$sh_2ei$- that yields the Hittite radical *ḫi*-verb *išḫ(a)i*- 'bind'. Because a derivational relationship between *išḫiman*- and *išḫ(a)i*- obtains synchronically in Hittite and because no cognate neuter *-*men*-stem is attested in Hittite or elsewhere in IE, it is reasonable to project this relationship back to PIE itself. If this morphological analysis is correct, Hitt. *išḫiman*- would provide evidence for the phonological reconstruction of independent primary *-*mon*-stems in (7).

Evidence corroborating this reconstruction may come from Greek. The most significant form in this respect is Gk. πλαταμών 'broad body/space', which phonologically reflects *$pl̥th_2$-*món*- with zero-grade root and suffixal stress.

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thematic vowel, which can surface as either *[o] or *[e] in the derived form; thus, e.g., *$h_2(e)\hat{k}$-*re-món*- (> Gk. ἀκρεμών 'branch') and *$seĝ^h$-*o-mon*- (> Lat. *Sēmō*) are both non-primary derivatives of thematic adjectives, but the thematic vowel has *[e]-quality in the former and *[o] in the latter. This variation awaits a satisfactory explanation.

Morphologically, this form is of special interest because it is quite unlikely that the root **pleth₂-* '(be) broad' formed a neuter **-men-*stem in PIE. This follows from two points of general agreement: (i) that this root was part of the "Caland system" (see, e.g., Nussbaum 1976, Widmer 2004, Rau 2009 and discussion in Lundquist and Yates 2018:2114–5) and (ii) that roots belonging to this system formed neuter abstract nouns with the suffix **-o/es-* (rather than with **-men-*).[26] In other words, the root **pleth₂-* formed **pléth₂-o/es-* 'breadth' (> Ved. *práth-as-*, YAv. *fraϑah-*, MW *lled*) but likely not **pléth₂-men-* (no attested reflexes). If that is correct, then Gk. πλαταμών must continue a primary **-mon-*stem rather than an ID **-mon-*stem, in which case it also supports the reconstruction of primary independent **-mon-*stems in (7) with zero-grade root and suffixal stress.

An apparent obstacle to this analysis, however, is Ved. *prathimán-* 'extent', which is standardly interpreted as a **-mon-*stem from the same root as Gk. πλαταμών but appears to continue full-grade of the root (i.e., **pleth₂-món-*).[27] Yet it is likely that in this case Greek rather than Vedic reflects the inherited form. The strongest argument for treating Ved. *prathimán-* as innovative in this respect is the well-known diachronic tendency for full-grades to emerge in zero-grade contexts in Vedic roots of the shape *CRaC-*; this tendency can be observed even with the verbal paradigm of *prath$^{i}$-* in Vedic (e.g., 3SG.PFC.MID *paprathé* for expected ˣ*paprthé*; see Jamison 1983:59, 209 n.9). Moreover, Kiparsky (forthcoming) argues on morphological grounds that *prathimán-* is innovative, attributing its full-grade to analogy with comparative *práthīyas-* and superlative *práthiṣṭha-*.[28]

There is therefore evidence in Greek and Anatolian that PIE primary independent **-mon-*stems had zero-grade root and suffixal stress as in (7). Given the limited evidence, this reconstruction is hardly secure. In addition, this reconstruction further implies that primary-looking **-mon-*stems with full-grade root must be formed by ID from neuter **-men-*stems, which is questionable in certain cases. For instance, the securely reconstructible **-mon-*stem **telh₂-món-* (> Gk. τελαμών 'strap', OIr.

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26 Some evidence that neuter **-men-* and **-o/es-*stems were mutually exclusive comes from Vedic. Both suffixes are highly productive, but they are in a near complementary distribution such that roots form abstracts with one suffix or the other. There are just four exceptions in the Ṛgveda: *man-* 'think' ⇒ *mán-man-*, *mán-as-* 'thought'; *sad-* 'sit' ⇒ *sád-man-*, *sád-as-* 'seat'; *kr̥-* 'do' ⇒ *kár-man-*, *kár-as-* (RV IV.19.10) 'deed'; *vác-* 'speak' ⇒ *vák-man-* 'speech' (RV I.132.2), *vác-as-*. None of these roots has been connected with the "Caland system."

27 The only form of the stem attested in Vedic is INS.SG *prathinā́*, which has just one unique occurrence in the RV (I.8.5c = VIII.56.1c); its status is thus perhaps less secure than usually assumed.

28 For discussion of the relationship between *-man-*stems and comparative and superlative adjectives in Vedic, see Debrunner 1954:754–5.

*talam* 'earth')[29] would depend on a neuter *-*men*-stem **télh₂-men-*, although reflexes of this neuter have to my knowledge not (yet) been identified.[30] Nevertheless, I believe that the reconstruction proposed in (7) best accounts for the facts considered here, and hope that this proposal spurs on a fuller (re-)assessment of the comparative evidence for the phonology and morphology of *-*mon*-stems in PIE.

**References**

Adams, Douglas Q. 2015. *Tocharian B: A Grammar of Syntax and Word-Formation*. Innsbruck: Institut für Sprachen und Literaturen der Universität Innsbruck.

Beekes, Robert S. P. 2010. *Etymological Dictionary of Greek*. Leiden: Brill.

Debrunner, Albert. 1954. *Altindische Grammatik* II/2: *Die Nominalsuffixen*. Göttingen: Vandenhoeck & Ruprecht.

Eichner, Heiner. 1982. Zur hethitischen Etymologie (1. *ištark-* und *ištarnink-*; 2. *ark-*; 3. *šešd-*). In Neu 1982, 16–28.

Fortson, Benjamin W. IV. 2010. *Indo-European Language and Culture: An Introduction*[2]. Oxford: Wiley-Blackwell.

Gusmani, Roberto. 1964. *Lydisches Wörterbuch. Mit grammatischer Skizze und Inschriftensammlung*. Heidelberg: Winter.

Hoffner, Harry A., and H. Craig Melchert. 2008. *A Grammar of the Hittite Language* I: *Reference Grammar*. Winona Lake, IN: Eisenbrauns.

*HW*[2] = Friedrich, Johannes, Annelies Kammenhuber, and Inge Hoffmann. 1975–. *Hethitisches Wörterbuch*[2]. Heidelberg: Winter.

Jamison, Stephanie W. 1983. *Function and Form in the* -áya- *Formations of the Rig Veda and Atharva Veda*. Göttingen: Vandenhoeck & Ruprecht.

Jasanoff, Jay H. 2003. *Hittite and the Indo-European Verb*. Oxford: Oxford University Press.

———. 2018. The Prehistory of the IE Perfect: A Contribution to the Theory of the *h₂e*-Conjugation. In Elisabeth Rieken (ed.), *100 Jahre Entzifferung des Hethitischen: Morphosyntaktische Kategorien in Sprachgeschichte und Forschung. Proceedings of the Arbeitstagung of the Indogermanische Gesellschaft, Marburg, 21. bis 23. September 2015*, 137–56. Wiesbaden: Reichert.

*KEWA* = Manfred Mayrhofer. 1956–64. *Kurzgefasstes etymologisches Wörterbuch des Altindischen*. Heidelberg: Winter.

29 Perhaps also Lat. *Tellumō* (see Weiss 2017:386 n.51).

30 The etymologically related Greek adjective τλήμων 'enduring', on the other hand, could potentially be explained in the same way as πλαταμών—i.e., as a reflex of **tl̥h₂-món-*, a primary deverbal *-*mon*-stem. An inner-Greek derivation from AOR.INF τλῆναι 'endure' is more probable, though.

Kiparsky, Paul. Forthcoming. Accent and Ablaut. In Andrew Garrett and Michael Weiss (eds.), *Handbook of Indo-European Studies*. Oxford: Oxford University Press.

Kloekhorst, Alwin. 2008. *Etymological Dictionary of the Hittite Inherited Lexicon*. Leiden: Brill.

*LIV*$^2$ = Helmut Rix and Martin J. Kümmel (eds.). 2001. *Lexikon der indogermanischen Verben: Die Wurzeln und ihre Primärstammbildungen*$^2$. Wiesbaden: Reichert.

Lundquist, Jesse, and Anthony D. Yates. 2018. The Morphology of Proto-Indo-European. In Jared S. Klein, Brian D. Joseph, and Matthias Fritz (eds.), *The Handbook of Comparative and Historical Indo-European Linguistics*, 2079–195. Berlin: de Gruyter.

McCone, Kim. 1995. OIr. *senchae*, *senchaid*, and Preliminaries on Agent Noun Formation in Celtic. *Ériu* 46.1–10.

Melchert, H. Craig. 1983. A 'New' PIE **men* Suffix. *Die Sprache* 29/1.1–26.

———. 1993. Cuneiform Luvian Lexicon. Chapel Hill, NC: Self-Published.

———. 1994. *Anatolian Historical Phonology*. Amsterdam: Rodopi.

———. 2003. Hittite Nominal Stems in *-anzan-*. In Tichy, Wodtko, and Irslinger 2003, 129–37.

———. 2004. Second thoughts on PIE **y* and **$h_2$* in Lydian. In Michel Mazoyer and Robert Casabonne (eds.), *Studia Anatolica et Varia: Mélanges offerts au professeur René Lebrun* II, 139–50. Paris: Harmattan.

———. 2013. Ablaut Patterns in the Hittite *ḫi*-Conjugation. In Stephanie W. Jamison, H. Craig Melchert, and Brent Vine (eds.), *Proceedings of the 24th Annual UCLA Indo-European Conference, Los Angeles, 26–27 October 2012*, 137–50. Bremen: Hempen.

———. 2020. Hittite Historical Phonology after 100 Years (and after 20 years). In Ronald Kim, Jana Mynářová, and Peter Pavúk (eds.), *Hrozný and Hittite: The First 100 Years. Prague, 11–14 November 2015*, 258–76. Leiden: Brill.

Neu, Erich (ed.). 1982. *Investigationes Philologicae et Comparativae: Gedenkschrift für Heinz Kronasser*. Wiesbaden: Harrassowitz

*NIL* = Dagmar S. Wodtko, Britta Sofie Irslinger, and Carolin Schneider (eds.). 2008. *Nomina im Indogermanischen Lexikon*. Heidelberg: Winter.

Nussbaum, Alan J. 1976. Caland's "Law" and the Caland System. Ph.D. diss., Harvard University.

Oettinger, Norbert. 1979. *Die Stammbildung des hethitischen Verbums*. Nuremberg: Hans Carl.

———. 1982. Reste von *e*-Hochstufe im Formans hethitischer *n*-Stämme einschließlich des '*umna*' Suffixes. In Neu 1982, 162–77.

———. 2003. Zum Ablaut von *n*-Stämmen im Anatolischen und der Brechung *ē* > *ya*. In Tichy, Wodtko, and Irslinger 2003, 141–52.

Pedersen, Holgar. 1938. *Hittitisch und die anderen indoeuropäischen Sprachen*. Copenhagen: Levin & Munksgaard.

Probert, Philomen. 2006. *Ancient Greek Accentuation: Synchronic Patterns, Frequency Effects, and Prehistory*. Oxford: Oxford University Press.

Puhvel, Jaan. 1984. *Hittite Etymological Dictionary* I: *Words Beginning with A*. Berlin: Mouton.

Rau, Jeremy. 2009. *Indo-European Nominal Morphology: The Decads and the Caland System*. Innsbruck: Institut für Sprachen und Literaturen der Universität Innsbruck.

Remmer, Ulla. 2002–3. Das indogermanische Suffix *-*mon*- im Altirischen (Teil I). *Die Sprache* 43/2.171–211.

———. 2004. Das indogermanische Suffix *-*mon*- im Altirischen (Teil II). *Die Sprache* 44/1.26–69.

Roussou, Stephanie. 2018. *Pseudo-Arcadius Epitome of Herodian's De Prosodia Catholica*. Oxford: Oxford University Press.

Sasseville, David. 2018. The Pre-History of the Verbal Stem Formation of the Luwic Languages. Ph.D. diss., Phillips-Universität Marburg.

Schindler, Jochem. 1975. Armenisch *erkn*, griechisch ὀδύνη, irish *idu*. *Historische Sprachforschung* 89.53–65.

Starke, Frank. 1990. *Untersuchung zur Stammbildung des keilschrift-luwischen Nomens*. Wiesbaden: Harrasowitz.

Thurneysen, Rudolf. 1961. *A Grammar of Old Irish*. Dublin: Dublin Institute for Advanced Studies.

Tichy, Eva , Dagmar S. Wodtko, and Britta Irslinger (eds.). 2003. *Indogermanisches Nomen: Derivation, Flexion und Ablaut. Akten der Arbeitstagung der Indogermanischen Gesellschaft, Freiburg, 19 bis. 22 September 2001*. Bremen: Hempen.

Watkins, Calvert. 1962. *The Indo-European Origins of the Celtic Verb* I: *The Sigmatic Aorist*. Dublin: Dublin Institute for Advanced Studies.

Weiss, Michael. 2017. An Italo-Celtic Divinity and a Common Sabellic Sound Change. *Classical Antiquity* 36/2.370–89.

———. 2020. *Outline of the Historical and Comparative Grammar of Latin*[2]. Ann Arbor: Beech Stave.

West, Martin L. (ed.). 2017. *Homerus: Odyssea*. Berlin: de Gruyter.

Widmer, Paul. 2004. *Das Korn des weiten Feldes: Interne Derivation, Derivationskette und Flexionsklassenhierarchie. Aspekte der nominalen Wortbildung im Urindogermanischen*. Innsbruck: Institut für Sprachen und Literaturen der Universität Innsbruck.

Yakubovich, Ilya. 2017. An Agreement Between the Sardians and the Mermnads in the Lydian Language? *Indogermanische Forschungen* 122.265–93.

Yates, Anthony D. 2016. Left But Not Leftmost? On the Interaction Between Epenthesis and Ictus Assignment in Anatolian. In Stephanie W. Jamison, H. Craig Melchert, and Brent Vine (eds.), *Proceedings of the 26th Annual UCLA Indo-European Conference*, 161–78. Bremen: Hempen.

———. 2017. Lexical Accent in Cupeño, Hittite, and Indo-European. Ph.D. diss., University of California, Los Angeles.

———. 2019a. Suffixal **o*-Vocalism Without "Amphikinesis:" On Proto-Indo-European *-*oi*-Stems and Ablaut as a Diagnostic for Word Stress. In David M. Goldstein,

Stephanie W. Jamison and Brent Vine (eds.), *Proceedings of the 30th Annual UCLA Indo-European Conference*, 199–221. Bremen: Hempen.

———. 2019b. The Word-Prosody of Proto-Indo-European *-*mon*-Stems and Their Implications for Internal Derivation. Paper presented at the 31st Annual UCLA Indo-European Conference, Los Angeles, 8–9 November 2019. Handout available at http://www.adyates.com/research/.